

FORM PTO-1390
(REV 10-94)

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

ATTORNEY'S DOCKET NUMBER

TRANSMITTAL LETTER TO THE UNITED STATES
DESIGNATED/ELECTED OFFICE (DO/EO/US)
CONCERNING A FILING UNDER 35 U.S.C. 371

7510.192USWO

U.S. APPLICATION NO. (If known, see 37 CFR 1.52)

unknown 09/341817

INTERNATIONAL APPLICATION NO.

PCT/FI97/00703

INTERNATIONAL FILING DATE

17 November 1997

PRIORITY DATE CLAIMED

TITLE OF INVENTION

PROCEDURE IN CONJUNCTION WITH MAKING A TELECOMMUNICATION CALL AND A TELECOMMUNICATION
TERMINAL ARRANGEMENT

APPLICANT(S) FOR DO/EO/US

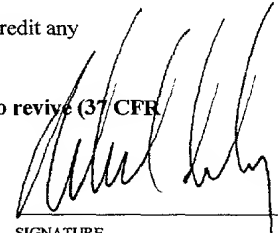
Taina PUUMALAINEN

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☒ This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(l).
4. ☐ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.
5. ☒ A copy of the International Application as filed (35 U.S.C. 371(c)(2))
 - a. ☒ is transmitted herewith (required only if not transmitted by the International Bureau).
 - b. ☒ has been transmitted by the International Bureau.
 - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☐ A translation of the International Application into English (35 U.S.C. 371(c)(2)).
7. ☐ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
 - a. ☐ are transmitted herewith (required only if not transmitted by the International Bureau).
 - b. ☐ have been transmitted by the International Bureau.
 - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
 - d. ☐ have not been made and will not be made.
8. ☐ A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. ☒ An unsigned oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4)).
10. ☐ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11. to 16. below concern document(s) or information included:

11. ☐ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. ☒ A FIRST preliminary amendment.
☐ A SECOND or SUBSEQUENT preliminary amendment.
14. ☐ A substitute specification.
15. ☐ A change of power of attorney and/or address letter.
16. ☒ Other items or information: copy of Swedish Patent Office International Search Report

U.S. APPLICATION NO (If known, see 37 C.F.R. 1.5) unknown 09/341817		INTERNATIONAL APPLICATION NO PCT/FI97/00703		ATTORNEY'S DOCKET NUMBER 7510.192USWO	
17. <input checked="" type="checkbox"/> The following fees are submitted: BASIC NATIONAL FEE (37 CFR 1.492(a) (1)-(5)): Search Report has been prepared by the EPO or JPO.....\$840.00 International preliminary examination fee paid to U.S. Patent and Trademark Office (37 CFR 1.492(a)(1)).....\$670.00 No international preliminary examination fee paid to USPTO (37 CFR 1.482) but international search fee paid to USPTO (37 CFR 1.445(a)(2)).....\$760.00 Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(3)) paid to USPTO\$970.00 International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(2)-(4).....\$96.00				CALCULATIONS PTO USE ONLY	
ENTER APPROPRIATE BASIC FEE AMOUNT =				\$ 970.00	
Surcharge of \$130.00 for furnishing the oath or declaration later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(e)).				\$ 0.00	
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		
Total claims	14 -20 =	0	X \$18.00	\$ 0.00	
Independent claims	2 -3 =	0	X \$78.00	\$ 0.00	
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+ \$260.00	\$ 0.00	
TOTAL OF ABOVE CALCULATIONS =				\$ 970.00	
Reduction by 1/2 for filing by small entity, if applicable. Verified Small Entity Statement must also be filed (Note 37 CFR 1.9, 1.27, 1.28).				\$ 0.00	
SUBTOTAL =				\$ 970.00	
Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(f)).				+ \$ 0.00	
TOTAL NATIONAL FEE =				\$ 970.00	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property				+ \$ 0.00	
TOTAL FEES ENCLOSED =				\$ 970.00	
				Amount to be:	
				refunded	\$
				charged	\$
a. <input checked="" type="checkbox"/> Check(s) in the amount of <u>\$970.00</u> to cover the above fees is enclosed. b. <input type="checkbox"/> Please charge my Deposit Account No. _____ in the amount of \$ _____ to cover the above fees. A duplicate copy of this sheet is enclosed. c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>13-2725</u> .					
NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.					
SEND ALL CORRESPONDENCE TO Michael B. Lasky MERCHANT & GOULD P.C. 3100 Norwest Center 90 South Seventh Street Minneapolis, MN 55403					
				 SIGNATURE	
				Michael B. Lasky NAME	
				29,555 REGISTRATION NUMBER	

121932

INSTRUCTIONS

SMALL BUSINESS

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS
37 CFR 1.9(f) AND 1.27(c) - SMALL BUSINESS CONCERN

I hereby declare that I am

Check one ☐ a) () the owner of the small business concern identified below:

☐ b) () an official of the small business concern empowered to act on behalf of the concern identified below:

Insert company
name and
address

NAME OF CONCERN: HELP SET OYADDRESS OF CONCERN: Imantie 3 F 38FIN-90560 Oulu, Finland

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 CFR 121.12, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

Insert title of
application,
inventor's
names

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention, entitled PROCEDURE IN CONJUNCTION WITH MAKING A TELECOMMUNICATION by inventor(s) Taina Puumalainen CALL AND A TELECOMMUNICATION TERMINAL ARRANGEMENT described in

Check one,
fill in
a) or b)

☐ a) () the specification filed herewith.☐ b) () application serial no. _____, filed _____☐ c) () patent no. _____, issued _____☐ d) non-provisional application, serial number 09/341,817, filed July 19, 1999

If the rights held by the above-identified small business concern are not exclusive, each individual, concern or organization having rights to the invention is listed below and no rights to the invention are held by any person, other than the inventor, who could not qualify as an independent inventor under 37 CFR 1.9(d), if that person had made the invention, or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e). **NOTE:** Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

Insert co-owners,
if any, and check
a), b) or c)

NAME _____

ADDRESS _____

☐ a) () INDIVIDUAL☐ b) () SMALL BUSINESS CONCERN☐ c) () NONPROFIT ORGANIZATION

NAME _____

ADDRESS _____

☐ a) () INDIVIDUAL☐ b) () SMALL BUSINESS CONCERN☐ c) () NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereof, or any patent to which this verified statement is directed.

Insert

NAME _____

TITLE Help Set PO

ADDRESS _____

Sign, date

SIGNATURE Taina PuumalainenDATE 27.07.1999 Clarke

INSTRUCTIONS

INDEPENDENT INVENTOR(S)

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS (37 CFR 1.9(f) and 1.27(b)) - INDEPENDENT INVENTOR

Insert title of application

As a below named inventor, I hereby declare that I qualify as an independent inventor as defined in 37 CFR 1.9(c) for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code, to the Patent and Trademark Office with regard to the invention entitled PROCEDURE IN CONJUNCTION WITH MAKING A TELECOMMUNICATION CALL AND described in A TELECOMMUNICATION TERMINAL ARRANGEMENT

Check one,

fill in if b)

or c)

a) ☐ the specification filed herewith.b) ☐ application serial no. _____ filed _____c) ☐ patent no. _____ issued _____d) ☒ non-provisional application, serial number 09/341,817, filed July 19, 199

I have not assigned, granted, conveyed or licensed and am under no obligation under contract or law to assign, grant, convey or license, any rights in the invention to any person who could not be classified as an independent inventor under 37 CFR 1.9(c) if that person had made the invention, or to any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern or organization to which I have assigned, granted, conveyed, or licensed or am under obligation under contract or law to assign, grant, convey, or license any rights in the invention is listed below:

Check one

a) ☐ no such person, concern, or organizationb) ☒ persons, concerns or organizations listed below

NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

If b, insert owners

NAME HELP SET OY; Irmantie 3 P 38, FIN-90560 Oulu, Finland

ADDRESS _____

a) ☐ INDIVIDUALb) ☒ SMALL BUSINESS CONCERNc) ☐ NONPROFIT ORGANIZATION

NAME _____

ADDRESS _____

a) ☐ INDIVIDUALb) ☐ SMALL BUSINESS CONCERNc) ☐ NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereof, or any patent to which this verified statement is directed.

Insert each inventor

NAME OF INVENTOR Taina Puumala

NAME OF INVENTOR _____

NAME OF INVENTOR _____

Sign

Signature of Inventor Taina Puumala

Signature of Inventor _____

Signature of Inventor _____

Date

Date 27.07.1999 Oulu

Date _____

Date _____

09/341817
514 Rec'd PCT/PTO 19 JUL 1999

S/N unknown

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	PUUMALAINEN	Docket No.:	7510.192USWO
Serial No.:	unknown	Filed:	concurrent herewith
Int'l Appln No.:	PCT/FI97/00703	Int'l Filing Date:	17 November 1997
Title:	PROCEDURE IN CONJUNCTION WITH MAKING A TELECOMMUNICATION CALL AND A TELECOMMUNICATION TERMINAL ARRANGEMENT		

CERTIFICATE UNDER 37 CFR 1.10

'Express Mail' mailing label number: EL353246264US

Date of Deposit: 19 July 1999

I hereby certify that this correspondence is being deposited with the United States Postal Service 'Express Mail Post Office To Addressee' service under 37 CFR 1.10 on the date indicated above and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

By:

Name: Hassen Buie

PRELIMINARY AMENDMENT

Box PCT
Assistant Commissioner for Patents
Washington, D. C. 20231

Dear Sir:

In connection with the above-identified application filed herewith, please enter the following preliminary amendment:

IN THE ABSTRACT

Insert the attached Abstract page into the application as the last page thereof.

IN THE SPECIFICATION

A courtesy copy of the present specification is enclosed herewith. However, the World Intellectual Property Office (WIPO) copy should be relied upon if it is already in the U.S. Patent Office.

REMARKS

A new abstract page is supplied to conform to that appearing on the publication page of the WIPO application, but the new Abstract is typed on a separate page as required by U.S. practice.

Applicant respectfully requests that the preliminary amendment described herein be entered into the record prior to examination and consideration of the above-identified application.

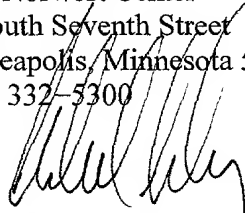
If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicant's primary attorney-of record, Michael B. Lasky (Reg. No. 29,555), at (612) 336-4634.

Respectfully submitted,

MERCHANT & GOULD P.C.
3100 Norwest Center
90 South Seventh Street
Minneapolis, Minnesota 55402
(612) 332-5300

Dated: 19 July 1999

By



Michael B. Lasky
Reg. No. 29,555

MBL/smh

ABSTRACT OF THE DISCLOSURE

The subject of the present invention is a procedure and an equipment arrangement in conjunction with making a telecommunication call. In said procedure implemented in conjunction with making a call, means of searching included in a telecommunication terminal arrangement are used to directly or indirectly at least partly browse through dial numbers stored in said telecommunication terminal arrangement to locate a desired dial number. Means of commanding included in said telecommunication terminal arrangement are used to command a transmitter of said telecommunication terminal to begin making a direct or indirect call to a final, retrieved dial number. According to the present invention, in conjunction with said direct or indirect browsing, graphic information, which identifies the owner of each dial number and which is stored in a graphic memory of said telecommunication terminal arrangement, is displayed on a display of said telecommunication terminal arrangement.

A procedure in conjunction with making a telecommunication call and a telecommunication terminal arrangement

The subject of the present invention is a procedure in conjunction with making a telecommunication call, in which procedure means of searching included in a telecommunication terminal arrangement are used to directly or indirectly at least partly browse through dial numbers stored in said telecommunication terminal arrangement to locate a desired dial number, and means of commanding included in said telecommunication terminal arrangement are used to command a transmitter of said telecommunication terminal arrangement to begin making a direct or indirect call to a final, retrieved dial number, and in which procedure, in conjunction with said direct or indirect browsing, graphic information, which identifies the owner of each dial number and which is stored in a graphic memory of said telecommunication terminal arrangement, is displayed on a display of said telecommunication terminal arrangement.

The subject of the present invention also is a telecommunication terminal arrangement, which comprises a transmitter, a dial number memory and means of searching used to locate a desired dial number in said dial number memory, and means of commanding used to command said transmitter to begin making a call to a dial number retrieved from said dial number memory, and which arrangement comprises a graphic memory including graphic information which illustrates the owners of said dial numbers included in said dial number memory, which graphic memory is linked to function together with said dial number memory so that while directly or indirectly browsing said dial numbers, said arrangement displays graphic information related to said owner of said dial number on a display included in said arrangement and/or a display connected to said arrangement.

Because of aging and the complexity and difficulty of using devices, making a phone call is especially difficult for elderly people. For this reason, security phones have been developed which comprise a terminal bracelet connected via a transceiver to an actual terminal device located in an elderly person's residence, which terminal device is connected to a fixed telephone network. The bracelet comprises a button by which a call can be made, e.g., via the actual terminal device connected to the fixed network. A deficiency of said device is that it can only be used to call a specific number, and said device does not provide clear information about where the call is going to, or even information about whether or not the call has left.

Complete cellular network phones integrated into bracelets are known, e.g., described in publications EP-681 390 and EP-572 252, but they do not provide the user with sufficient and easily obtainable information about making a call.

For instance, GSM phones include a known solution whereby pressing the ABC key, for example, causes the display to display a text showing the name linked to each number in the phone number memory, but this function is difficult for an elderly person to perform, and on the other hand, this type of function is not sufficiently clear and informative.

Another problem associated with solutions according to the prior art is that the user may accidentally call an emergency number, for example, whereupon an ambulance or the police make an unnecessary visit.

Publication WO-94/01958 describes a device intended for use in a vehicle, equipped with a hands-free function, including a voice-controlled audio menu that supplements or replaces a normal visual menu. The audio menu facilitates use of the device, but the device is still deficient when considering its use by elderly people and other persons with special needs.

In receiving a call, with GSM phones, for example, the use of A-subscriber recognition is known, whereby it is possible to show the name of the caller on the display, but said solution does not provide sufficient noticeable information.

The purpose of the present invention is to bring forth a new procedure and arrangement that avoids the problems associated with solutions of the prior art.

Said purpose is achieved by means of a procedure according to the present invention, characterized in that while displaying graphic information identifying owners of dial numbers shown on a display, a move occurs from one main category of graphic memory to another main category, and within a desired main category, a move occurs between subcategories and/or members of said main category

Said purpose is achieved by means of a telecommunication terminal arrangement, characterized in that said graphic memory comprises a menu structure, which comprises several main categories, and said main categories comprise one or more subcategories and/or members of said main category.

The solution according to the present invention is based on the idea that the terminal device implements a graphic memory, which is linked to function together with a dial number memory/connection code memory.

The solution according to the present invention achieves several advantages. A device according to the present invention is very informative, as it shows the user graphic information, e.g., a picture of a relative, to inform the user that a number retrieved from the number memory is precisely the number of the relative the user wishes to call. The user can unconcernedly give a command to make a call, whereupon the phone begins to make a phone connection to said relative. Advantageous realizations and other specific realizations of the present invention emphasize the advantages of the invention. The telecommunication connection may be a voice connection, data connection or other connection.

The present invention is explained in more detail in the following, with references to the enclosed drawings.

Figure 1 presents a block diagram of an arrangement according to one embodiment.

Figure 2 presents a first embodiment of an arrangement.

Figure 3 presents a menu structure of a graphic memory,

Figure 4 presents a menu structure illustrating one main category and a subcategory of said category

Figure 5 presents another embodiment of a display of a telecommunication terminal arrangement according to figure 2.

Referring to the figures, particularly figures 1 - 2, the object of the present invention is a telecommunication terminal arrangement 1 and a procedure used therein for making a telecommunication call and answering a telecommunication call. To begin with, the present invention is described as far as making a call is concerned.

The telecommunication terminal arrangement 1 comprises a transceiver 2, a dial number memory 3, i.e., a phone number memory 3, means of searching 4 used to locate a phone number from said phone number memory 3, and means of commanding 5 used to command said transceiver to attempt to make a call to a phone number retrieved from said phone number memory. Said arrangement also comprises a control unit 6, a microphone 7, earphones 8, an antenna 9, and a display 10. A dial number refers to an actual number or its code.

A telecommunication terminal arrangement 1 according to the present invention comprises a graphic memory 21 including graphic information which illustrates the owners of said phone numbers included in said phone number memory 3, which graphic memory is linked to function together with said phone number memory 3 so that while directly or indirectly browsing said phone number memory 3 said device is arranged to display graphic information related to said number (being currently accessed during said browsing procedure) on a display 10 included in said arrangement and/or a display connected to said arrangement.

Referring to figure 3, an advantageous embodiment of the present invention comprises a menu structure 30 comprising several main categories 31 - 34, and said main categories comprise one or more subcategories and/or members 31a - 31d, 32a - 32d, 33a - 33d, 34a - 34d of said main category. Said main categories of said menu structure 30 include one or more of the following main categories: health care services 31, transportation services 32, stores 33, authorities/agencies 34, relatives, friends, financial institutions. The example in figure 4 illustrates a health care services main category 31 and its subcategories 31a - 31d. Said subcategories are ambulance 31a, health care center physician 31b, apothecary 31c and health care center 31d.

In an advantageous embodiment of the present invention, said display 10 is a touch, pressure or otherwise sensitive display which also forms a means of commanding used to command said transceiver 2 to begin directly or indirectly making a call to a final retrieved phone number. In this case separate means of commanding are not necessary, making said device easier to use.

Direct (directly connected to a telecommunication network) calling means that, e.g., a bracelet-type complete device 1 calls a cellular network base station, for example, and thereby a final phone number. Indirect calling means that, e.g., a bracelet-type device 1 wirelessly first calls a terminal (not presented) included in said telecommunication terminal arrangement located in an elderly person's residence, and said terminal is connected to a telephone network via a normal fixed connection.

Referring especially to figure 2, in an advantageous embodiment of the present invention, said arrangement 1 is primarily formed into a single entirety, advantageously in the form of a bracelet 1a, which comprises said means, i.e., a transceiver 2, a phone number memory 3, a graphic memory 21, means of searching 4, means of commanding 5, a display 10 and/or a display connection, earphones 8 and/or an earphone jack, and a microphone 7 and/or a microphone connector. In such a case said device is compact and easy to use.

In an advantageous embodiment of the present invention, said arrangement 1 is realized using a cellular radio phone, such as a cellular radio phone operating in a GSM, DCS or CDMA system. Naturally, other types of networks and their terminal technologies are suitable.

Referring mainly to figure 1, it is stated that in an advantageous embodiment of the present invention, said display is a separate unit apart from an integrated entirety formed by said transceiver 2, phone number memory 3, graphic memory 21, means of searching 4, and means of commanding 5, said separate unit being connected by wire or wirelessly to said integrated entirety. In such a case in an advantageous embodiment said display is a television. In this embodiment it is possible to form a large color image. Nevertheless, according to the present applicant's observations, the best embodiment is in accordance with figure 1, i.e., said display 10 is included in said device 1a, because in that case said display is always with the user.

From the standpoint of a procedure, this is a question of a procedure in conjunction with making a telecommunication call. In said procedure, means of searching 4 included in a telecommunication terminal arrangement 1 are used to directly or indirectly at least partly browse through phone numbers stored in said telecommunication terminal arrangement to locate a desired phone number, and means of commanding 5 included in said telecommunication terminal arrangement are used to command a transceiver 2 of said telecommunication terminal to begin directly or indirectly making a call to a final retrieved phone number. In an embodiment including a display like the one presented in figure 1, the term at least partly browse means that naturally, a person does not need to browse through all of said phone numbers and/or all of said images, but rather, browsing is performed until the user has caused the graphic information linked to the desired phone number to be displayed. In an embodiment including a display like the one presented in figure 5, the term at least partly browse means that the user directly selects the desired image (and the number linked to said image).

In the procedure according to the present invention, while directly or indirectly browsing said phone numbers, said arrangement retrieves graphic information

identifying each phone number from said graphic memory of said telecommunication terminal arrangement and displays said graphic information on said display 10 included in said telecommunication terminal arrangement.

The term indirect browsing is illustrated by means of the following advantageous embodiment. In an advantageous embodiment of the present invention, indirect, at least partial browsing of said phone numbers is performed by at least partly browsing through said graphic memory 21 linked to said phone number memory 3. Basically, however, this is a question of browsing through said phone number memory 3, because the contents of said phone number memory 3 are linked by pairs with the contents of said graphic memory 21. At the same time, the phone number linked to said displayed graphic information can be retrieved from said phone number memory 3. Said embodiment is advantageous because said phone number and/or a name linked to said phone number can also be displayed, and also because said number is already retrieved, whereupon the number associated with said image is known before the means of commanding 6 are used to give a command to make a call. In another embodiment of the present invention, a number is retrieved from said number memory only for the graphic information that at which the user ceases to browse the graphic memory 21 and commences to press or otherwise activate means of commanding 5, i.e., a phone number is retrieved only for the graphic information corresponding to the number to which the user wishes to call. The advantage of this embodiment is quicker, simpler operation.

The term direct partial browsing is illustrated by means of the following advantageous embodiment. In an advantageous embodiment of the present invention, direct, at least partial browsing of said phone numbers is performed by at least partly browsing through the phone number memory 3 linked to the graphic memory 21. The advantage of this embodiment is that the number is known and it can be shown on the display 10.

In an advantageous embodiment of the present invention, said graphic information is color and/or black and white graphic information similar to photographic information. In figure 1 the graphic information shows an elderly person's grandchild, for example.

In an advantageous embodiment of the present invention, said graphic information covers a significant part, advantageously at least 50 - 80 %, perhaps even 100 % of the display of said telecommunication terminal arrangement 1. Most advantageously, said display 10 is almost completely covered, except for a part of said display that conventionally shows a phone number or the name of the owner of a phone number or other information.

In an advantageous embodiment of the present invention, a move is made from one image to the next in the graphic memory by touching, pressing or otherwise activating said display, for example by using means of searching 4 to move to the next graphic information. This feature simplifies use.

In an advantageous embodiment of the present invention, after a specified time delay, said graphic information is automatically replaced by said next graphic information. A

delay element is represented by block 200. This type of autoscrolling facilitates use of the device. In an advantageous embodiment said time delay is a few seconds, for example, 3 - 6 seconds.

The following also refers to figure 5. Figure 5 presents second embodiment of a display 10 of a telecommunication terminal arrangement according to figure 2, which version comprises several display parts 10a - 10i. In said version of figure 5, all said display units display graphic information, and the user selects one of these by pressing or otherwise indication a selection. Thus, said graphic information is already displayed before said user has performed a search. However, according to the applicant's observations, said version is not as advantageous as the previously described version, where said images are displayed by turn, allowing a large image as shown in figure 2. The version presented in figure 5 is included in the basic idea of the present invention, because the user's deliberation and selection of one image from among many can be considered partial browsing of phone numbers, where browsing is performed only for one number, i.e., the selected number.

In a certain other embodiment figure 5 can be interpreted as such that the images are images of a main menu, and images found "under" said main category are images belonging to said main category. This means, for example, that "under" the main category image icon in display part 10f, which presents agencies, there is graphic information related to agencies, which is accessible by pressing, and telephone numbers linked to said graphic information are naturally stored in said phone number memory 3.

In an advantageous embodiment of the present invention, the search for a number can be made even clearer by using audio memory 300 in addition to graphic memory. Said audio memory uses a hearing aid 8 or speaker or other means of producing sound to relay an audio signal informing the user the identity of the owner of the phone number being currently accessed while browsing said phone number memory 3. Said audio signal is created in conjunction with said graphic information, providing the most effective result. Most advantageously said audio memory 300 and graphic memory 21 are essentially the same means of memory, which includes multimedia-type graphic and audio information. Said stored graphic and audio information can be realized by means of a suitable integrated memory circuit.

Said arrangement may also include a conventional keyboard 600, particularly when a device is in question that also functions as a normal terminal device of a cellular radio network. Said device may also comprise means or at least a connection by which the information content of memory 21 and/or 300 can be modified.

Also referring to figure 1, the object of the present invention is a procedure and telecommunication terminal arrangement in conjunction with receiving a telecommunication call in call reception. Said device comprises a receiver part 2, RX, a connection code memory (e.g., a phone number memory) 3, and means of identifying 700 used to identify a connection code in a telecommunication call to said telecommunication terminal. Said arrangement also comprises a graphic memory 21 including graphic information which illustrates the owners of said connection codes

included in said connection code memory 3, which graphic memory is linked to function together with said connection code memory 3 and means of identifying 700 so that said arrangement displays graphic information related to said owners of said connection codes on a display 10 included in said arrangement and/or a display connected to said arrangement. In an example situation according to figures 1 and 2, said display 10 of said arrangement 1 displays the image of the person calling his/her own number in said arrangement.

The part of the procedure of the present invention concerning reception of a telecommunication call is a question of displaying graphic information identifying the owner of said connection code found in said graphic memory 21 included in said telecommunication terminal arrangement on said display 10 of said telecommunication terminal arrangement. Thus, said device identifies the number from which a call has come and retrieves graphic information corresponding to said number from said graphic memory and displays said graphic information on said display 10.

Thus, said connection code may be a caller's phone number, but said connection code may also be e.g., an identifying code or similar code on which basis said telecommunication arrangement retrieves information related to said code from said graphic memory, which information may be advertisement information, for example. The effect can be enhanced by presenting audio information describing said caller/advertiser.

Although the present invention is described in detail above with references to example embodiments presented in the enclosed figures, it is clear that the present invention is not limited by the presented example embodiments, but rather it can be modified in many ways to the extent of the innovation described by the enclosed claims.

Claims

1. A procedure in conjunction with making a telecommunication call, in which procedure means of searching (4 or 10a - 10i) included in a telecommunication terminal arrangement (1, 1a) are used to directly or indirectly at least partly browse through dial numbers stored in said telecommunication terminal arrangement to locate a desired dial number, and means of commanding (5 or 10, 10a - 10i) included in said telecommunication terminal arrangement are used to command a transmitter (2, TX) of said telecommunication terminal to begin making a call to a final, retrieved dial number, and in which procedure, in conjunction with said direct or indirect browsing, graphic information, which identifies the owner of each dial number and which is stored in a graphic memory (21) of said telecommunication terminal arrangement, is displayed on a display (10) of said telecommunication terminal arrangement.

is characterized in that while displaying said graphic information identifying said owners of said dial numbers on said display, a move occurs from one main category of said graphic memory to another main category, and within a desired main category, a move occurs between subcategories and/or members of said main category.

2. The procedure according to claim 1, characterized in that said graphic information is color and/or black and white information similar to photographic information.

3. The procedure according to claim 1, characterized in that said graphic information fills a significant part, advantageously 50 - 100 %, of said display (10) of said telecommunication terminal arrangement.

4. The procedure according to claim 1, characterized in that said indirect, at least partial browsing of said dial numbers is performed by at least partially browsing said graphic memory (21) linked to a dial number memory (3).

5. The procedure according to claim 1, characterized in that said direct, at least partial browsing of said dial numbers is performed by at least partially browsing a dial number memory (3) linked to said graphic memory (21).

6. The procedure according to claim 1, characterized in that within said graphic memory (21), a move occurs to the next image by touching or pressing an image or by other means.

7. The procedure according to claim 1, characterized in that after a specific delay controlled by a delay unit (200), said displayed graphic information is replaced by the next graphic information.

8. A telecommunication terminal arrangement, which comprises a transmitter (2, TX), a dial number memory (3) and means of searching (4) used to locate a desired dial number in said dial number memory (3), and means of commanding (5) used to command said transmitter (2) to begin making a call to a dial number retrieved from said dial number memory (3), and which arrangement comprises a graphic memory

(21) including graphic information which illustrates the owners of said dial numbers included in said dial number memory (3), which graphic memory is linked to function together with said dial number memory (3) so that while directly or indirectly browsing said dial numbers, said arrangement displays graphic information related to said owners of said dial numbers on a display (10) included in said arrangement and/or a display connected to said arrangement,

is characterized in that said graphic memory comprises a menu structure (30), which comprises several main categories (31 - 34), and said main categories comprise one or more subcategories and/or members (31a - 31d) of said main category.

9. The arrangement according to claim 8, characterized in that said main categories of said menu structure (30) include one or more of the following main categories (31 - 34): health care services, authorities, relatives, friends, stores, financial institutions.

10. The arrangement according to claim 8, characterized in that said display (10, 10a - 10i) is a touch, pressure, or otherwise sensitive display which also forms a means of commanding.

11. The arrangement according to claim 8, characterized in that said arrangement is primarily formed into a single entirety (1a), advantageously in the form of a bracelet, which comprises said means, which are a transmitter (2, TX), a dial number memory (3), a graphic memory (21), means of searching (4), means of commanding (5), a display (10) and/or a display connector, earphones (8) and/or an earphone jack, and a microphone (7) and/or a microphone connector.

12. The arrangement according to claim 8, characterized in that said display (10), which advantageously is a television, is a unit separate from said integrated entirety comprising a transmitter (2, TX), a dial number memory (3), a graphic memory (21), means of searching (4), and means of commanding (5), and which unit is connected by wire or wirelessly to said integrated entirety.

13. The arrangement according to claim 8, characterized in that said arrangement is realized using a cellular phone, such as a cellular radio phone operating in a GSM, DCS or CDMA system.

14. The arrangement according to claim 8, characterized in that said graphic memory is linked to function together with an audio memory (300) included in said arrangement, whereby said graphic memory and audio memory form a memory device which includes multimedia-type graphic and audio information.

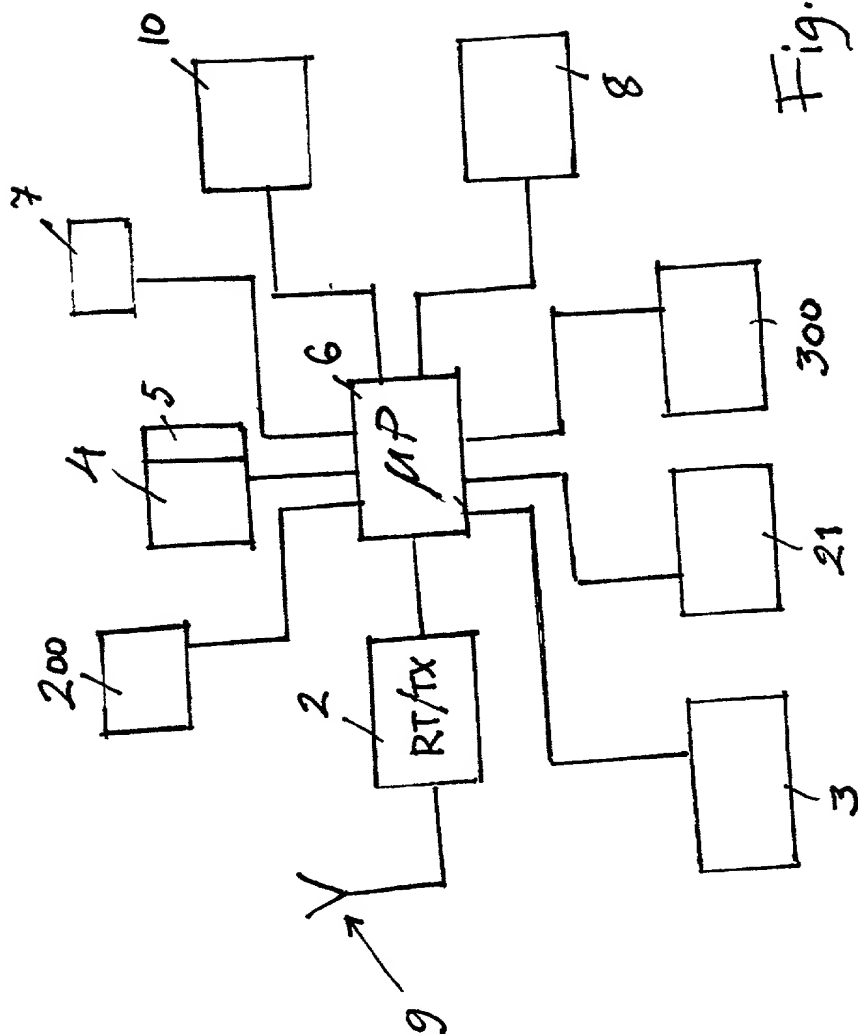
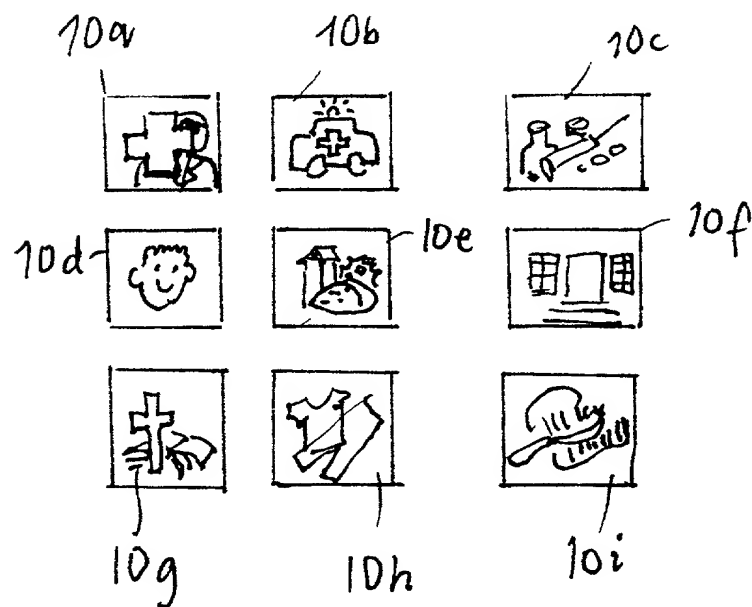
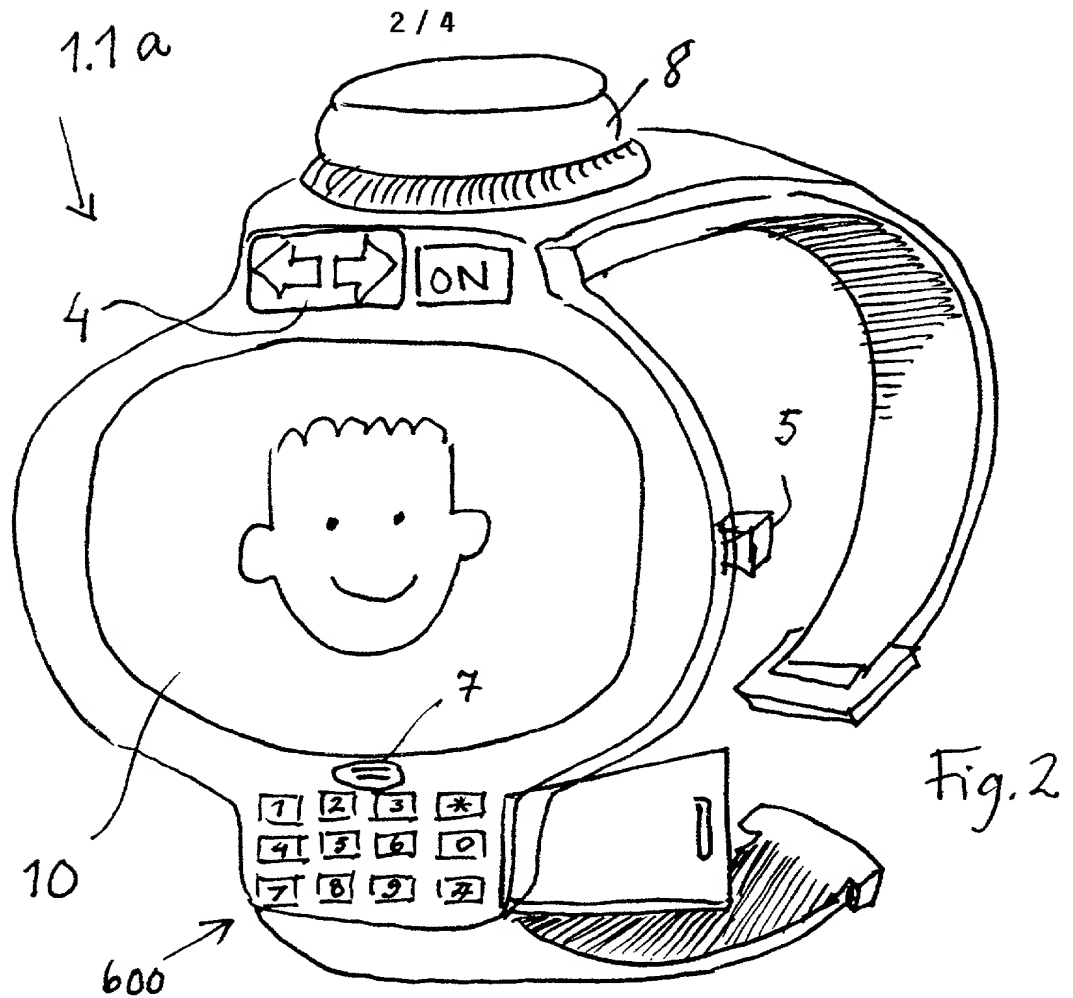


Fig. 1.



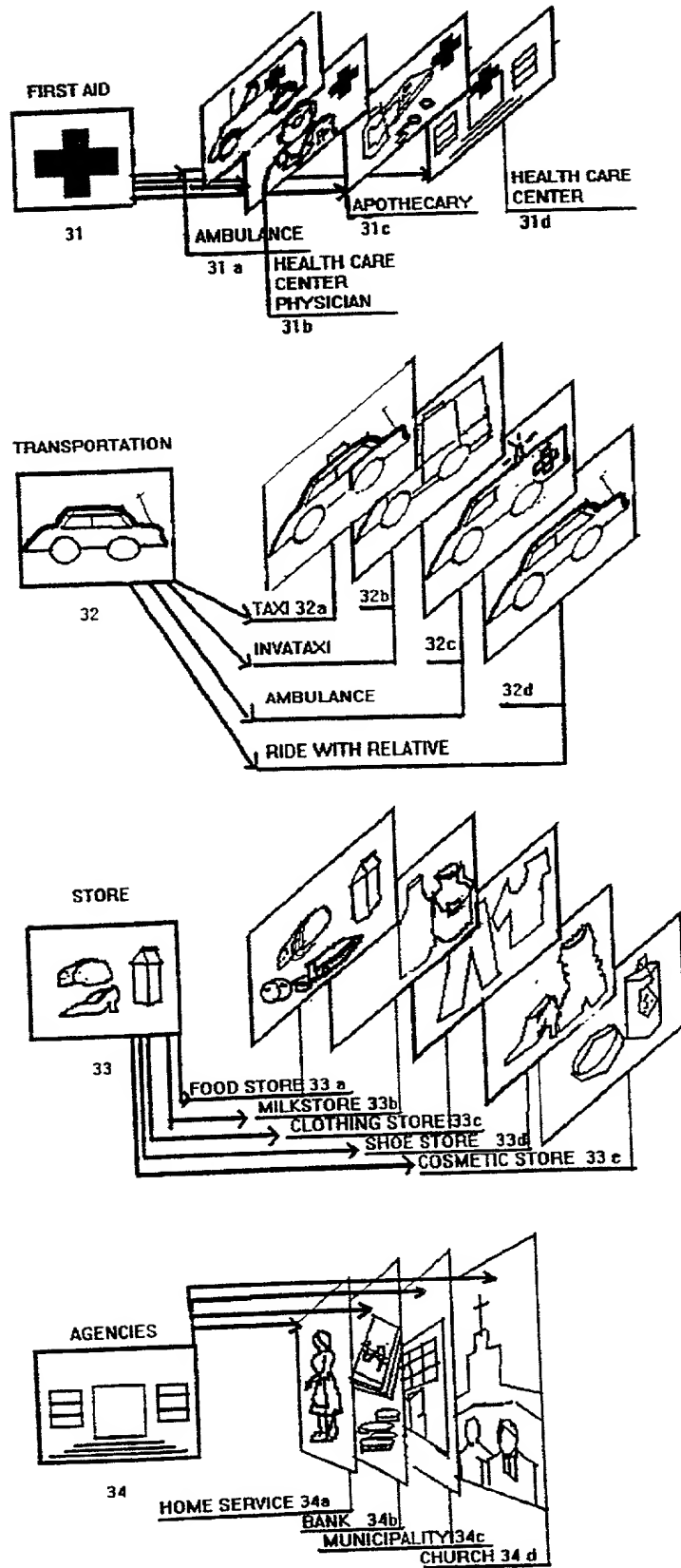
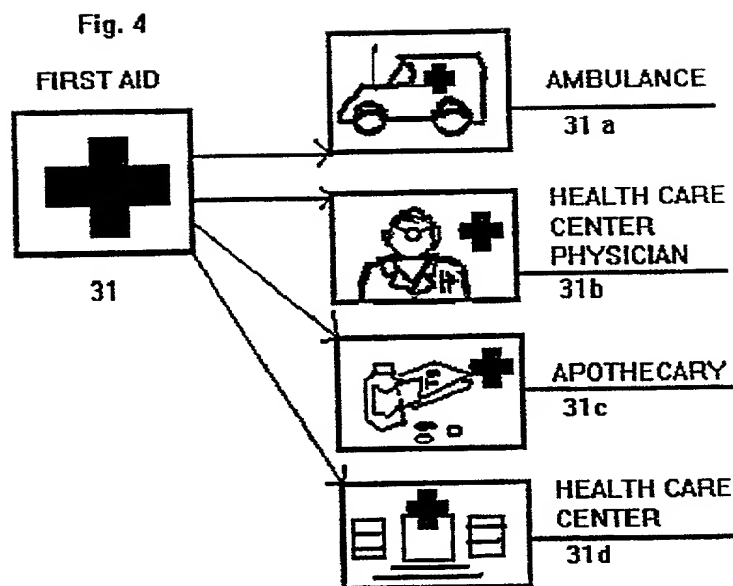


Fig. 3



Attorney Docket No. 7510.192USWO

MERCHANT & GOULD P.C.

United States Patent Application

COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor I hereby declare that: my residence, post office address and citizenship are as stated below next to my name; that

I verily believe I am the original, first and sole inventor (if only one name is listed below) or a joint inventor (if plural inventors are named below) of the subject matter which is claimed and for which a patent is sought on the invention entitled: **PROCEDURE IN CONJUNCTION WITH MAKING A TELECOMMUNICATION CALL AND A TELECOMMUNICATION TERMINAL ARRANGEMENT**

The specification of which

a. ☐ is attached hereto

b. ☒ was filed on 19 July 1999 as application serial no. and was amended on (if applicable) (in the case of a PCT-filed application) described and claimed in international no. PCT/FI97/00703 filed 17 November 1997 and as amended on (if any), which I have reviewed and for which I solicit a United States patent.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with Title 37, Code of Federal Regulations, § 1.56 (attached hereto).

I hereby claim foreign priority benefits under Title 35, United States Code, § 119/365 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on the basis of which priority is claimed:

a. ☒ no such applications have been filed.

b. ☐ such applications have been filed as follows:

FOREIGN APPLICATION(S), IF ANY, CLAIMING PRIORITY UNDER 35 USC § 119			
COUNTRY	APPLICATION NUMBER	DATE OF FILING (day, month, year)	DATE OF ISSUE (day, month, year)
ALL FOREIGN APPLICATION(S), IF ANY, FILED BEFORE THE PRIORITY APPLICATION(S)			
COUNTRY	APPLICATION NUMBER	DATE OF FILING (day, month, year)	DATE OF ISSUE (day, month, year)

I hereby claim the benefit under Title 35, United States Code, § 120/365 of any United States and PCT international application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, § 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. APPLICATION NUMBER	DATE OF FILING (day, month, year)	STATUS (patented, pending, abandoned)

I hereby claim the benefit under Title 35, United States Code § 119(e) of any United States provisional application(s) listed below:

U.S. PROVISIONAL APPLICATION NUMBER	DATE OF FILING (Day, Month, Year)

I hereby appoint the following attorney(s) and/or patent agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith:

Albrecht, John W.
Anderson, Gregg I.
Ansems, Gregory M.
Batzli, Brian H.
Beard, John L.
Black, Bruce E.
Bogucki, Raymond A.
Bruss, Steven C.
Byrne, Linda M.
Carlson, Alan G.
Caspers, Philip P.
Chiapetta, James R.
Clifford, John A.
Cochran, William W.
Daigault, Ronald A.
Daley, Dennis R.
Dalglish, Leslie E.
Daulton, Julie R.
DeVries Smith, Katherine M.
DiPietro, Mark J.
Edell, Robert T.
Epp Ryan, Sandra
Funk, Steven R.
Glance, Robert J.
Goggin, Matthew J.
Golla, Charles E.
Gorman, Alan G.
Gould, John D.
Gregson, Richard
Gresens, John J.
Hamre, Curtis B.
Hillson, Randall A.
Holzer, Jr., Richard J.
Johnston, Scott W.
Kadievitch, Natalie D.
Kastelic, Joseph M.
Kettelberger, Denise
Knearl, Homer L.
Kowalchuk, Alan W.
Kowalchuk, Katherine M.
Kubota, Glenn M.
Lacy, Paul E.
Larson, James A.

Reg. No. 40,481
Reg. No. 28,828
Reg. No. 42,264
Reg. No. 32,060
Reg. No. 27,612
Reg. No. 41,622
Reg. No. 17,426
Reg. No. 34,130
Reg. No. 32,404
Reg. No. 25,959
Reg. No. 33,227
Reg. No. 39,634
Reg. No. 30,247
Reg. No. 26,652
Reg. No. 25,968
Reg. No. 34,994
Reg. No. 40,579
Reg. No. 36,414
Reg. No. 42,157
Reg. No. 28,707
Reg. No. 20,187
Reg. No. 39,667
Reg. No. 37,830
Reg. No. 40,620
Reg. No. 44,125
Reg. No. 26,896
Reg. No. 38,472
Reg. No. 18,223
Reg. No. 41,804
Reg. No. 33,112
Reg. No. 29,165
Reg. No. 31,838
Reg. No. 42,668
Reg. No. 39,721
Reg. No. 34,196
Reg. No. 37,160
Reg. No. 13,924
Reg. No. 21,197
Reg. No. 31,535
Reg. No. 36,848
Reg. No. 44,197
Reg. No. 38,948
Reg. No. 40,443

Lasky, Michael B.
Licpa, Mara E.
Lindquist, Timothy A.
Lynch, David W.
Marschang, Diane L.
McDonald, Daniel W.
McIntyre, Iain A.
Mueller, Douglas P.
Nelson, Albin J.
Pauley, Nicholas J.
Pauly, Daniel M.
Phillips, John B.
Plunkett, Theodore
Pyrel, Melissa J.
Reich, John C.
Reiland, Earl D.
Rittmaster, Ted R.
Schmaltz, David G.
Schuman, Mark D.
Schumann, Michael D.
Sculi, Timothy B.
Sebald, Gregory A.
Skoog, Mark T.
Soderberg, Richard
Storer, Shelley D.
Sumner, John P.
Summers, John S.
Swenson, Erik G.
Tellekson, David K.
Trembath, Jon R.
Underhill, Albert L.
Vandenburgh, J. Derek
Vradenburgh, Anna M.
Weiter, Paul A.
Wahl, John R.
Whipps, Brian
Wickhem, J. Scot
Williams, Douglas J.
Win, Jonelle
Wood, William J.
Xu, Min S.
Zenli, Anthony R.

Reg. No. 29,555
Reg. No. 40,066
Reg. No. 40,701
Reg. No. 36,204
Reg. No. 35,600
Reg. No. 32,014
Reg. No. 40,337
Reg. No. 30,300
Reg. No. 28,650
Reg. No. P-44,999
Reg. No. 40,123
Reg. No. 37,206
Reg. No. 37,209
Reg. No. 41,512
Reg. No. 37,703
Reg. No. 25,767
Reg. No. 32,933
Reg. No. 39,828
Reg. No. 31,197
Reg. No. 30,422
Reg. No. 42,137
Reg. No. 33,280
Reg. No. 40,178
Reg. No. P-43,352
Reg. No. P-45,135
Reg. No. 29,114
Reg. No. 24,216
Reg. No. P-45,147
Reg. No. 32,314
Reg. No. 38,344
Reg. No. 27,403
Reg. No. 32,179
Reg. No. 39,868
Reg. No. 20,890
Reg. No. 33,044
Reg. No. 43,261
Reg. No. 41,376
Reg. No. 27,054
Reg. No. 41,980
Reg. No. 42,236
Reg. No. 39,536
Reg. No. P-45,255

I hereby authorize them to act and rely on instructions from and communicate directly with the person/assignee/attorney/firm/ organization who/which first sends/sent this case to them and by whom/which I hereby declare that I have consented after full disclosure to be represented unless/until I instruct Merchant & Gould P.C. to the contrary.

Please direct all correspondence in this case to Merchant & Gould P.C. at the address indicated below:

Merchant & Gould P.C.
3100 Norwest Center
90 South Seventh Street
Minneapolis, MN 55402-4131

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

2	Full Name Of Inventor <i>P. O.</i>	Family Name PUUMALAINEN	First Given Name <i>Taina</i>	Second Given Name Tuulikki
0	Residence & Citizenship	City Oulu	State or Foreign Country Finland	Country of Citizenship Finland
1	Post Office Address	Post Office Address Imantie 3-F 38	City Oulu	State & Zip Code/Country FIN-90560/ Finland
Signature of Inventor 201: <i>Taina Puumalainen</i>			Date: <i>27.07.1999 Oulu</i>	

Finland

§ 1.56 Duty to disclose information material to patentability.

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is canceled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is canceled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

(1) prior art cited in search reports of a foreign patent office in a counterpart application, and

(2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

(1) It establishes, by itself or in combination with other information, a *prima facie* case of unpatentability of a claim;

or

(2) It refutes, or is inconsistent with, a position the applicant takes in:

(i) Opposing an argument of unpatentability relied on by the Office, or

(ii) Asserting an argument of patentability.

A *prima facie* case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

(1) Each inventor named in the application;

(2) Each attorney or agent who prepares or prosecutes the application; and

(3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.